Department of Environmental Protection
Bureau of Land & Water Quality Jan. 2001

O&M Newsletter

A monthly newsletter for wastewater discharge licensees, treatment facility operators, and associated persons

Personnel Changes at DEP

We recently had a couple of changes in Division of Engineering, Compliance and Technical Assistance (DECTA). Bill Brown is now the Division Director, replacing Dennis Purington and Steve McLaughlin has accepted the position previously held by Bill Brown as Environmental Engineering Services Manager. For now Steve will continue to administer the CSO program as he had before. Congratulations to both of them.

Training Opportunity

This is a reminder that there will be an operator forum for Northern Maine WWTP operators on February 1st at McCain Foods in Easton. If anyone wants more details please call me at 764-0477 or Bill Daniels at McCains 488-2561 ext. 399

Bill Sheehan

EPA DMR QA Study # 20 Update

Participants in the EPA DMR QA Study #20 should have received their chemistry results from their chemistry provider labs by now. Hope you all did well! For those who did receive a non-acceptable result for any of the effluent parameters required by your NPDES Permit, they need to get a corrective action letter into the State EPA DMR QA coordinator [me] by February 5, 2001. No response is required from you directly to the EPA.

Some of the provider labs are sending guidance on how to follow-up on non-acceptable results with the final test results they are sending to their customers. Many of these have helpful recommendations that will assist you in your follow-up actions. However, the EPA does not necessarily require that all of these recommendations be followed. For example a retest QA sample is a good idea, but is not mandated by the EPA.

The corrective action letter that you send to me should contain at a minimum the following information:

- Identify the cause of the miss.
- Describe the corrective action taken to insure that the problem has been corrected and that it will not likely recur.
- Describe any other actions you have taken or any other programs you have in place that insure your ongoing lab work is generating

accurate DMR report data for the particular parameter[s] in question

- In some cases, the cause of the non-acceptable result can not be clearly identified. If this turns out to be the case, then a retest is a very appropriate, although voluntary, follow up action. Any retest does not necessarily have to be done through the same provider lab you originally used. Also, in these particular cases, any other information you have or other actions you have taken that insure that your ongoing DMR report data is accurate can help demonstrate that that your regular lab work is still reliable, despite the results of this particular study.

- If your non-acceptable chemistry result was generated by the contract lab you usually use, then the corrective action letter needs to come from that commercial lab to the participant. You need then to cover this with your own cover letter or memo regarding the non-acceptable result[s] and forward both of them on to me.

For your information on how the Department will follow-up on non-acceptable results, the sequence will be as follows:

- The corrective action letter will be logged in and reviewed by the state coordinator.

- A copy of the letter as well as a copy of all your parameter test results will be forwarded to your assigned treatment plant inspector for his or her information and review. Your assigned plant inspector will either accept your corrective actions as being complete and satisfactory on the basis of the actions you described in your letter or they may opt to request further follow-up actions. These could include requests for more information, an onsite evaluation of the procedure[s] in question, or other actions as warranted.

- If the non-acceptable results were generated by a commercial lab, the inspectors will still receive the above information, however the main responsibly for follow-up actions beyond the letter itself will be referred for resolution under Health & Engineering's commercial lab certification program.

I recently did a review of Study #20 test results for some of the POTW and industrial labs that the DEP has inspected quite frequently and thoroughly over a number of years. These are labs that we are quite sure do accurate work. Although this review was not done in a strictly scientific fashion and the conclusions can be questioned, the indication is quite strong that the true [assigned values] of these QA samples can be duplicated very closely under strict lab quality control procedures. This indicates that most provider labs probably do manufacture QA samples that contain fairly precise amounts of any given analyte. From the results of this review, it follows that participants may get more value from these studies if they compare their results to the actual assigned values for these samples and voluntarily review their procedures as this may warrant. Relying strictly on comparing your performance against the

acceptance range, which in some cases are quite wide, or even against the warning range for a given parameter may identify only worst case situations.

If you have any questions regarding this study, please call me at 287-7659

David Dodge

For Practice

1. A new industry is planning to locate in your town. They will be discharging process water to your treatment facility. You have received a sample of process water from another factory owned by the same company that has the same pollutants in the same quantities as the water you will be receiving at your facility. You mix some of the sample with some of your present influent in a ratio comparable to what you expect to receive when the new factory comes on line. When you run an OUR test on this mixture, you note that the respiration rate decreases. This indicates:
   a. The mixture is toxic to the mixed liquor.
   b. The sample is over aerated.
   c. The MLSS must be decreased to accept this waste.
   d. The new waste may require additional aeration to stabilize.

2. Your discharge license requires you to store wastewater in your lagoon for 160 days in the winter. If you have an average influent flow of 123,500 gallons/day and a total pond area of 17.22 acres (750,000 sq.ft.), how much freeboard do you need in your 8-foot deep lagoon?
   a. 0.5 ft.
   b. 3.0 ft.
   c. 3.5 ft.
   d. 8.0 ft.

3. The term “return sludge” usually refers to sludge from:
   a. Primary Clarifiers
   b. Secondary Clarifiers
   c. Aerobic Digesters
   d. Anaerobic Digesters

4. Which waterborne disease is caused by a virus?
   a. Cholera
   b. Tuberculosis
   c. Polio
   d. Diphtheria

UPCOMING TRAINING COURSES

Jan 9, 16, 23, 30 & Feb 6, 13, 2001 in Augusta - SWIM - sponsored by JETCC, (207) 767-2649 - Approved for 24 hours.
*****
January 10, 2001 in Brunswick, ME – Chemical Hygiene - sponsored by MRWA, (207) 729-6569 - Approved for 3 hours.
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January 23, 2001 in Bangor, ME – Variable Frequency Drives - sponsored by MRWA, (207) 729-6569 - Approved for 2.5 hours.
*****
January 24, 2001 in Bangor, ME – Chemical Hygiene - sponsored by MRWA, (207) 729-6569 - Approved for 3 hours.
*****
January 25, 2001 in Livermore Falls, ME – Applied Hydraulics - sponsored by MRWA, (207) 729-6569 - Approved for 4 hours.

February 7, 2001 in Topsham, ME – Excavations and Permit Required Confined Spaces - sponsored by MRWA, (207) 729-6569 - Approved for 5 hours.
*****
February 13, 2001 in Ellsworth - Onsite Installers Workshop - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
February 14, 2001 in Augusta - Mechanical Seals - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
February 14, 2001 in Whitneyville - Proprietary Devices - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
February 15, 2001 in Presque Isle, ME – Electric Motors: Types, Installations & Maintenance - sponsored by MRWA, (207) 729-6569 - Approved for 4 hours.
*****
February 20, 2001 in Augusta - Onsite Installers Workshop - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
February 22, 2001 in Portland - Advanced Septic System Technologies - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
February 26, 2001 in East Vassalboro, ME – Applied Hydraulics - sponsored by MRWA, (207) 729-6569 - Approved for 4 hours.
*****
February 27, 2001 in Portland, ME – Public Contracts and Competitive Bidding - sponsored by MRWA, (207) 729-6569 - Approved for 5 hours.
*****
February 28, 2001 in Norway, ME – Excavations and Permit Required Confined Spaces - sponsored by MRWA, (207) 729-6569 - Approved for 5 hours.
*****
March 1, 2001 in Bangor, ME – Electric Motors: Types, Installations & Maintenance - sponsored by MRWA, (207) 729-6569 - Approved for 4 hours.
March 5, 2001 in Brewer - Advanced Septic System Technologies - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
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March 8, 2001 in Presque Isle - Basic Chemistry - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
March 9, 2001 in Brunswick, ME – Wastewater Operator Certification Review – Class I/II - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.
*****
March 14, 2001 in So. Portland - Physical/Chemical Treatment - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
March 14, 2001 in Newport, ME – Excavations and Permit Required Confined Spaces - sponsored by MRWA, (207) 729-6569 - Approved for 5 hours.
*****
March 14, 2001 in Dover-Foxcroft - Onsite Installers Workshop - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
March 18, 2001 in Old Orchard Beach, ME – Chemical Feed Systems O&M - sponsored by MRWA, (207) 729-6569 - Approved for 3hours.
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March 19, 2001 in Brunswick, ME – Wastewater Operator Certification Review – Class III/IV - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.
*****
Mar 20, 27 & Apr 3, 10, 2001 in Augusta - Advanced Hydrology - sponsored by JETCC, (207) 767-2649 - Approved for 16 hours.
*****
March 20, 2001 in Bangor, ME – Wastewater Operator Certification Review – Class III/IV - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.
*****
March 21, 2001 in Houlton - Onsite Installers Workshop - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
March 21, 2001 in Belfast, ME – Excavations and Permit Required Confined Spaces - sponsored by MRWA, (207) 729-6569 - Approved for 5 hours.
*****
March 22, 2001 in Presque Isle - Proprietary Devices - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
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March 22, 2001 in Augusta - Seeded BOD w/ Lab Reporting & QA/QC - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
March 24, 2001 in Livermore Falls, ME – Chemical Feed Systems O&M - sponsored by MRWA, (207) 729-6569 - Approved for 3 hours.
*****
March 28, 2001 in Presque Isle, ME – Excavations and Permit Required Confined Spaces - sponsored by MRWA, (207) 729-6569 - Approved for 5 hours.
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March 29, 2001 in Yarmouth - Belt Filter Press - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
April 1, 2001 in TBA – Chemical Feed Systems O&M - sponsored by MRWA, (207) 729-6569 - Approved for 3 hours.
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April 4, 2001 in Ellsworth - Polymer Sealant Repair and Preventive Maintenance Systems - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
April 5, 2001 in Presque Isle - Computer Databases - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
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April 11, 2001 in Kennebunkport - Pump Station Control Panels - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
April 19, 2001 in Augusta - Basic Wastewater Treatment (2 days) - sponsored by JETCC, (207) 767-2649 - Approved for 12 hours.
*****
April 24, 2001 in Bangor - Bypass Pumping - How to Avoid the Headaches - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
April 30, 2001 in Bangor, ME – Wastewater Operator Certification Review – Class I/II - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.
*****
May 1, 2001 in Presque Isle, ME – Wastewater Operator Certification Review – Class I/II - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.

May 17, 2001 in Waterville - Biosolids - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
*****
May 10, 2001 in Presque Isle, ME – Wastewater Operator Certification Review – Class III/IV - sponsored by MRWA, (207) 729-6569 - Approved for 6 hours.
*****
May 16, 2001 in Augusta - Hydro Cad - sponsored by JETCC, (207) 767-2649 - Approved for 6 hours.
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Spring Certification Exam Notice

Note that the Spring certification exam will be given on May 16, 2001. Applications for that exam must be ***postmarked by March 31, 1998***. Applications that are received by us after April 4, 2001 will be held over until the Fall, 2001 exam. This fall, we had way too many people send in application after the deadline. The rules say "Completed applications with all supporting documentation must be received at least **6 weeks prior** to the examination date." This allows us to process the applications and order the appropriate number of tests for the exam. Please get your applications in by the deadline!!

Training Reminder

Please remember that operators who have odd numbered certificates must renew their certification in March of 2001. To renew your certification, you must have 18 contact hours of training since your last renewal. There are many training opportunities available through JETCC, MRWA, NEIETC and other trainers so there is little excuse for not completing your training requirement on time. Any training opportunities that we are aware of are noted in this newsletter every month. **Please Plan Ahead!** Look over the schedule posted in this newsletter and sign up for the courses you need now!!

Dick Darling

Fall Exam Results

The results of the latest certification exam given on November 15, 2000 are in. Everyone who took the exam should have received the results by now. If you haven't received a letter, please contact Dick Darling at 287-7806. The following is a breakdown of the pass rate for the different grade exams

Grade 1	5/12	42%
Grade 2	8/12	67%
Grade 3	4/9	44%
Grade 4	3/9	33%
Grade 5	12/30	40%
Overall	32/72	44%

Answers to *For Practice:*

1. a. A decrease in the respiration rate indicates that there may be something in the industrial waste that is toxic to the mixed liquor. Some pretreatment may be necessary at the industry to remove the toxic substance(s) that are causing the respiration rate to decrease.

2. c. 123,500 gal/day * 160 days = 19,760,000 gals
   19,760,000 gals / 7.5 cu. ft./gal = 2,634,667 cu. ft.
   2,634,667 cu. ft. / 750,000 sq. ft. = 3.51 ft. of freeboard. You would need to draw down your lagoon so that less than 4.5 feet of water remained in the lagoon at the beginning of the storage season.
3. b. Return sludge is the settled mixed liquor containing active microorganisms which is returned to the aeration basin from the secondary clarifiers.

4. c. The only disease listed which is caused by a virus is Polio.